Government of Saskatchewan

Annual Report
For the fiscal year ending
March 31, 1985

Saskatchewan
Science and
Technology

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Minister's Transmittal

Paul Schoenhals
Minister

To His Honour
The Honourable F.W. Johnson
Lieutenant-Governor of Saskatchewan
Government House
Regina, Saskatchewan

December 20, 1985

Dear Sir:

May It Please Your Honour:

The undersigned has the honour to submit the annual report of the Department of Science and Technology for the fiscal year ending March 31, 1985.

Respectfully submitted,

Paul Schoenhals
Minister
Saskatchewan Science
and Technology

Letters of Transmittal

Deputy Minister's Transmittal

A.J.Y. Guy
Deputy Minister

To the Honourable Paul Schoenhals
Minister of Science and Technology
Regina, Saskatchewan

December 19, 1985

Dear Sir:

May It Please Your Honour:

I have the honour of submitting the annual report of the Department of Science and Technology for the year ending March 31, 1985.

Respectfully submitted,

A. J. Y. Guy

A.J.Y. Guy
Deputy Minister

Saskatchewan Science and Technology

Developing a Strategy

Saskatchewan has a firm commitment to promoting the industrial development of advanced technology. Early in 1982, the Government of Saskatchewan received and reviewed a comprehensive study laying the basis for a science and technology policy and program compatible with the industrial and economic strategies of the province. The report documented the need for the co-ordination of the provincial approach to science and technology and for the provision of a complete advocacy service to the advanced technology sector. It justified special efforts to meet the unique and pressing needs of the advanced technology sector.

A science and technology strategy was announced by the Premier of Saskatchewan in mid 1983. The strategy recognized that the foundation of economic, industrial and social development in Saskatchewan depends on how well the province can develop, transfer, utilize and exploit new or advanced technology. It affirmed Saskatchewan's support for an advanced technology sector in the province.

The strategy was promptly put into action when the Honourable Gordon Currie was appointed Minister responsible for establishing the Department of Science and Technology. On January 1, 1984, the Department of Saskatchewan Science and Technology was formed and it began building links between all segments of the advanced technology sector.

Building Links

Saskatchewan Science and Technology has a clear and distinctive mandate. This mandate provides direction for the Department's work. All of its initiatives are directed at the co-ordination and facilitation of science and technology activity in the province and the stimulation of the advanced technology industrial sector and therefore the economy of the province. The mandate also provides focus. All programs focus on sharing the risk of developing, transferring, utilizing and exploiting advanced technology, with the people of Saskatchewan. The mandate also provides scope. The Department must be responsive to the needs of the entire advanced technology sector if Saskatchewan is to reap the maximum benefits.

There is a clear recognition that the Department plays a supportive and nurturing role. The private sector is the driving force, drawing new technology out of laboratories, developing new technology and developing products for market.

Specifically, the initiatives of Saskatchewan Science and Technology are designed to:

- co-ordinate the research, science and technology activities of industry, government, universities, public research institutions and supply agencies;
- stimulate the growth of industry in Saskatchewan by promoting the development, transfer, utilization and exploitation of technology;
- maximize economic benefits of advanced technology for the people of Saskatchewan;
- investigate the market potential of science and technology services of the Saskatchewan Research Council, Saskatchewan's universities and public laboratories;
- promote and co-ordinate international, federal, provincial and inter-provincial science and technology initiatives to promote new technology in Saskatchewan;
- evaluate public policy questions related to advanced technology;
- serve Saskatchewan people by promoting a dialogue on the implications and issues surrounding advanced technology.

Promoting Advanced Technology Industrial Development

Saskatchewan Science and Technology assists the advanced technology sector where it counts.

This sector faces the pressures of extreme competition and rapid turnover of technology. New firms need a wide range of services to become established. Saskatchewan Science and Technology shares the risk with these firms.

Saskatchewan Science and Technology

Providing a Full Range of Services

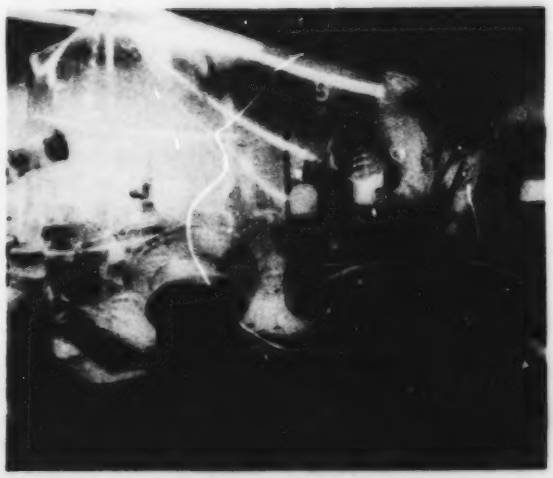
High risk is characteristic of all segments of the advanced technology sector.

- Inventors risk on the side of imagination. Saskatchewan Science and Technology gives inventors access to professionals who can help them determine if their invention is technically feasible or commercially viable.
- Researchers risk on the side of the future. Saskatchewan Science and Technology facilitates the transfer of new technology from the labs to firms that can develop the technology.
- Appliers of technology risk on the side of possibility. Saskatchewan Science and Technology helps them develop and market their products.
- Entrepreneurs risk on the side of optimism. Saskatchewan Science and Technology helps them develop business and financial plans vital for launching new ventures.

Making Connections

Because of the segmented nature of the advanced technology sector, it takes a concerted effort to build links between the various segments. Saskatchewan Science and Technology not only responds to the special needs of each segment, but works to make connections between all segments. For example, this fiscal year, Saskatchewan Science and Technology brought together researchers, scientists and firms looking for new technology, processes and products. Firms were also assisted in finding funding sources and exports in the business planning area. Inventors were referred to agencies which evaluated the commercial and technical viability of inventions.

Making these connections is the key to building an integrated and vibrant advanced technology sector in Saskatchewan.



Achieving Results

Diversifying Our Economic Base

The advanced technology sector is recognized as a major pillar of industrial development in Saskatchewan. The increasing number of advanced technology firms in Saskatchewan is proof that the strategy is working. During the period April 1, 1984 to March 31, 1985, 22 new advanced technology firms were established in Saskatchewan. In addition, 16 previously established firms were identified as developing new advanced technology processes.

Advanced technology activities in Saskatchewan range from food processing, micro-electronics, communications, agricultural biotechnology, computer software, design, robotics, aerospace, to agricultural value-added products.

Saskatchewan is especially strong in the aerospace field, ranking third among Canadian provinces. Saskatchewan is also becoming a leader in biotechnology and is making impressive strides in niche microtechnology.

Saskatchewan Science and Technology continues to support the initiatives of the advanced technology sector by nourishing all segments of the sector. In turn, Saskatchewan's economic diversification is strengthened and sustained.

Growing an Advanced Technology Cluster

Entrepreneurs and investors, along with private and public research agencies, universities and a network of training institutions have created a dynamic advanced technology cluster in Saskatchewan. This cluster is now lending support to a younger generation of exciting companies which have the potential to equal the accomplishments of the well-established companies. Many of these young companies are in the process of researching and developing "state of the art" products with tremendous commercial potential. Such companies often require immediate, professional and specialized services to become commercially viable and competitive.

The growth of the advanced technology cluster is fueled by individual companies which develop technology and take it to market. For example, this fiscal year, Saskatchewan Science and Technology assisted this growing cluster by entering into contracts with 22 Saskatchewan firms developing innovative advanced technology. The total value of these contracts was $826,241. (See Table 2 for contracts awarded through the Research and Development program funded by the Saskatchewan Heritage Fund.)

Creating New Jobs

Increasing employment figures for this sector show that advanced technology means jobs for the people of Saskatchewan. This fiscal year, the number of employees in the advanced technology sector increased by 26%, from 2,222 to 2,875. This sector is providing our young people with career opportunities equal to any in Canada. It gives our skilled university and technical school graduates highly paid jobs at the leading edge of technology.

Increasing Sales

Advanced technology is a multi-million dollar industry. Sales figures of Saskatchewan high tech firms jumped by 40% over this fiscal year, to a total value of sales of $367 million. Saskatchewan advanced technology firms are capturing North American markets as they continue to pioneer leading edge technology.

Levering Research & Development Funds

Saskatchewan Science and Technology helped Saskatchewan firms and research institutions access federal or other funds. The key to levering these funds is an initial commitment by Saskatchewan Science and Technology. In this fiscal year, Saskatchewan Science and Technology helped the advanced technology sector lever $1.5 million from the federal government in support of Saskatchewan firms developing and marketing advanced technology products.

Achieving Results

Responding To Changing Needs

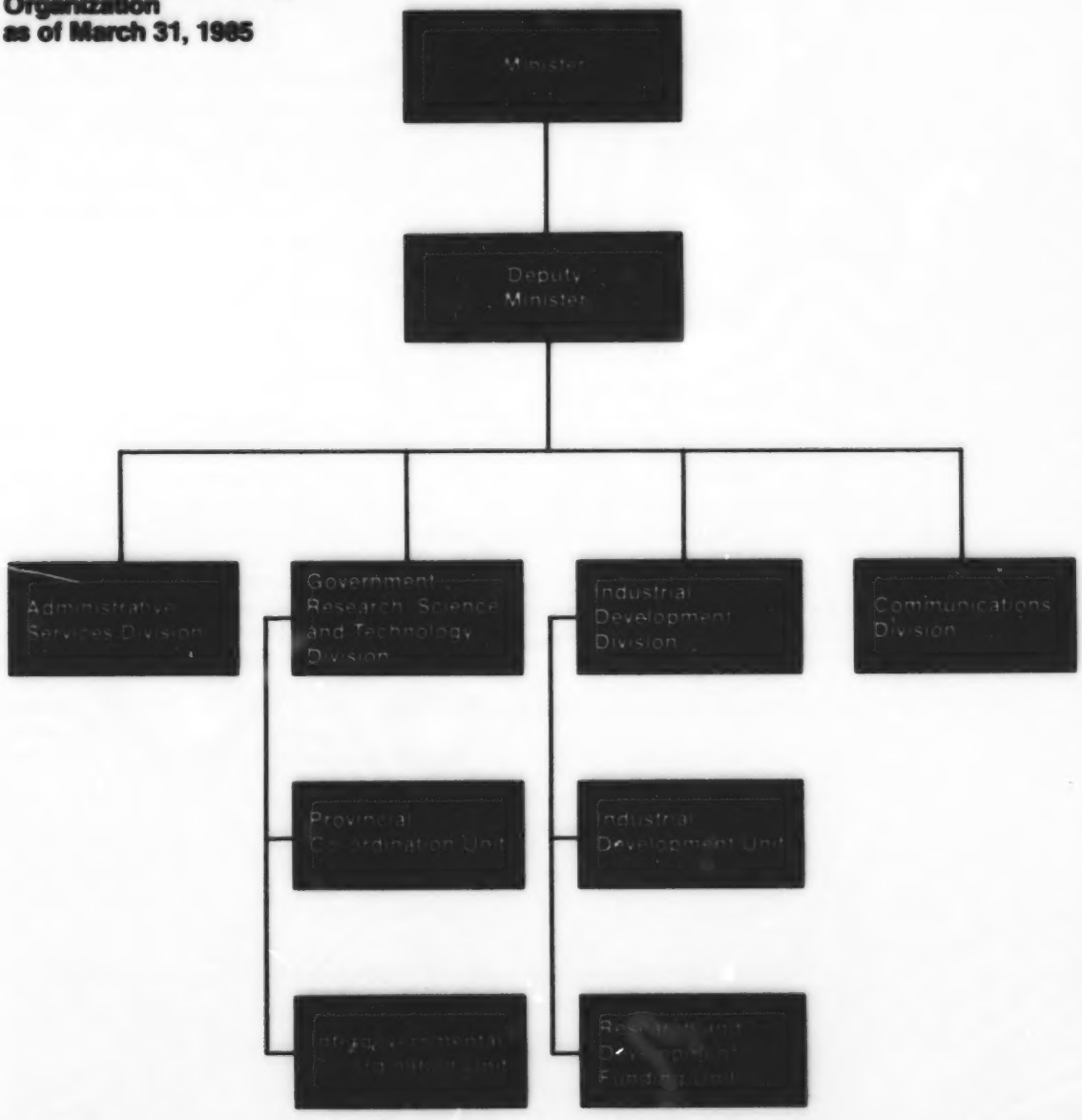
During the fiscal year, new opportunities and special needs of the advanced technology sector were identified through extensive dialogue with firms across the province. Saskatchewan Science and Technology responded by taking program initiatives and making policy adjustments to accommodate these developments. During the fiscal year, Saskatchewan Science and Technology developed seven new programs to complement existing federal and provincial research and development incentives.

Earning Respect for Saskatchewan Expertise

Saskatchewan is earning a solid reputation for its advanced technology sector. Sales to domestic and foreign markets continue to increase, and our firms and universities are recognized world leaders in several areas of expertise. This reputation for excellence and expertise is in turn attracting first rate entrepreneurs, scientists, researchers and investors to our province.

Organization

**Science and Technology
Organization
as of March 31, 1985**



Initiatives

Promoting New Technology Industries

After full consultation with researchers and representatives of the advanced technology industry, a seven part Research and Development Support Program was developed. This program is levering federal research funds, accelerating the growth of the advanced technology industry, diversifying Saskatchewan's economy and providing more jobs in highly skilled and highly paid fields for Saskatchewan people.

Funding comes from the $5 million of investment income earned by the Research and Development division of the Saskatchewan Heritage Fund.

1. Industrial Research Program

This program is aimed at companies which are Saskatchewan based and conducting research for advanced technology products or processes. The program augments existing federal funding for up to 25% of the cost of eligible research expenses. It helps Saskatchewan firms become more productive and competitive. The increased new product development means that Saskatchewan manufacturing can expand and grow.

2. Joint High Technology Research Program

This program is aimed at encouraging research and development in areas of industry and government which are considered a high priority. Funding under this program provides up to 50% of the eligible research costs. It provides financial assistance to support research projects in areas of mutual government and industry interest which leads to the production of advanced technology products for immediate use by provincial departments and agencies and opens a market niche for the firm.

3. Request for Proposals Program

Smaller high technology firms know that the costs of bidding on industrial projects is often more than they can afford. This program helps these firms prepare proposals or bids for large research projects. Funding under this program provides up to 1/3 of the cost of the proposal preparation, where the total cost of the proposal is at least $10,000. Saskatchewan benefits because successful companies bring business into the province and business means jobs for Saskatchewan people.

4. Feasibility Studies Program

This program is designed to help the small company, which has little or no marketing capability and limited technical capability, to accurately assess whether a proposed product is technically feasible and if it will sell. Support through this program is up to $2,500 for both a technical and commercial feasibility study on a 50/50 cost-shared basis with the company. This helps Saskatchewan firms avoid losses on products that won't work.

5. Research Infrastructure Program

High technology firms depend on research laboratories for technology development and testing. Support through this program is aimed at supplementing funding from existing sources. This program is designed to increase the capability of Saskatchewan research laboratories so that they can meet the needs of Saskatchewan firms.

6. Capital Equipment Program

This program shares the cost of special high technology testing equipment with Saskatchewan's two universities and the Saskatchewan Research Council. Funding is up to 50% of the cost of specified high technology equipment and complements the 50% provided by the contracting firm. This not only gives Saskatchewan firms access to the best and latest equipment but it also attracts out-of-province research work.

7. Information Transfer Program

The advanced technology sector needs a reliable and extensive information network in order to thrive. This program is designed to bring advanced technology information into Saskatchewan through activities such as seminars, conferences, inter-provincial committees, advisory councils, symposia or visiting experts. Funding for this program is negotiated on a cost-sharing basis. Saskatchewan benefits from the influx of profitable technological information.

Initiatives

Stimulating New Products, New Companies

Inventor Services Program

Technological innovation is an important key to improving our standard of living, providing social and economic solutions and stimulating industrial expansion. Saskatchewan is well known for its innovative and inventive past and modern-day pioneers.

Saskatchewan depends on technological innovation by independent inventors and small businesses. The Inventor Services Program is intended to encourage inventors to perform an evaluation of ideas and inventions at an early stage before money is spent for patents, licenses or further development. It gives Saskatchewan inventors and innovators access to confidential, commercial and technical evaluation services.

The technical and commercial evaluation process begins when the inventor approaches the Department for assistance. The invention is first referred to one of the two Innovation Offices located in either Saskatoon or Regina. The Innovation Office determines whether the invention conforms to very basic natural laws. If that technical evaluation is positive, the Innovation Office assists the inventor in proceeding to the next stage of applying for commercial evaluation. The invention is sent to the University of Oregon for evaluation by Dr. Udell. This commercial evaluation provides the inventor with a first-rate independent evaluation at the low cost of $100. The inventor receives an extensive evaluation report from Dr. Udell. If at this point the inventor decides to pursue commercialization of the invention, Saskatchewan Science and Technology can offer counselling and advice on patenting and routes to commercialization through the Entrepreneur Program.

Entrepreneur Program

Studies in Canada and the United States show that at least 50% of all new jobs are created by new companies with fewer than 20 employees. The key to increasing employment for Saskatchewan people is to accelerate the creation of new businesses. The Entrepreneur Program does this by offering many counselling services to entrepreneurs including: the development of business plans and prototypes; access to all sources of research development funding; interaction with venture capitalists; feasibility studies; marketing studies; patent services; funding proposal preparation; scientific and technical services at a "world class" level; personnel training and highly skilled manpower access; technology development contractual funding; joint project opportunities in Saskatchewan, Canada, and foreign countries; counsel and advice from Department personnel, or Department contracted experts.

Initiatives

Sharing the Risk

The Canada-Saskatchewan Subsidiary Agreement on Advanced Technology is a five year, $33 million agreement aimed at helping establish and speed the growth of advanced technology industries in Saskatchewan. Equally cost-shared between the governments of Canada and Saskatchewan, the agreement is the first of its kind in Canada. Its goals will be achieved by the following programs, which were developed after close consultation with industry. Continuing responsiveness to the needs of industry is ensured through the guidance of the Advisory Council, established in mid-1985 with representation from advanced technology industries, business associations and research institutions.

1. Development Analysis

This program helps industry to identify business opportunities which would support and speed up the growth of the entire industry. These can include professional and technical support services, product testing facilities, research facilities, local suppliers of inputs, training facilities and other requirements as identified by industry. When these studies are combined with the financial grants from Program 7, Saskatchewan industry has a powerful tool to expand or establish new firms to meet those needs.

2. University-Industry Collaboration

This program enhances co-operation between industries and the federal government to strengthen the universities' research and training capabilities in areas that industry considers important. Joint funding is provided to hire world-class university researchers and professors, to support their research costs, and to purchase equipment. The program provides Saskatchewan industry with trained scientists and engineers, supports university research which is of value to advanced technology industries, and supports Saskatchewan's tradition of advanced technology firms spinning out from the universities.

3. Task Forces and Project Teams

This program funds Saskatchewan industry-university groups working to commercialize university research and develop opportunities for industrial growth. These groups focus on specific projects and the program helps them fund their research costs. The program increases co-operation between industry and the universities, leading to a greater flow of new products and new businesses in Saskatchewan from university research.

4. Marketing Support

This program strengthens the marketing strategies and capabilities of advanced technology firms in Saskatchewan, by funding marketing studies and follow-up. The studies may assess a firm's current marketing approaches, develop a marketing plan for a line of products, or review market opportunities to help the firm plan its future research and product development directions. By strengthening the marketing abilities and activities of advanced technology firms, the program will lead to growth in sales, exports and jobs in Saskatchewan.

5. First-user Risk Reduction

This program helps launch new products onto the marketplace. Customers are often reluctant to be the first user of a new advanced technology product, because they are unsure whether it will

Initiatives

work. This program overcomes that reluctance by reducing the risk to the first user in two ways. It provides support to the manufacturer to, first, allow him to discount the price of the first unit, or, second, to provide intensive maintenance and service follow-up to ensure that the product performs properly in its first use. By helping the manufacturer find a first customer more quickly, and by ensuring that the customer is satisfied, the program increases and speeds up growth in sales, exports and jobs in Saskatchewan.

6. Bridging Capital Assistance

This program provides repayable, up-front, interest-free assistance to cash-short companies doing advanced technology research and development. Since most assistance and tax incentives for research and development are only available after the fact, many smaller, newer advanced technology firms cannot afford to carry a research and development project for its first several months. This program allows them to undertake that research and qualifies them for other government assistance, thus speeding and expanding their growth and development of new products in Saskatchewan.

7. Strategic Investment Assistance

This program provides incentives to companies undertaking new investments which will contribute to the growth of the industry as a whole. These opportunities must be identified by the industry (often with support from Program 1, described above). The investment need not itself be advanced technology in nature, but must provide services or support to the advanced technology industry, or fill a gap in its structure. This program supports Saskatchewan's economic growth by stimulating new businesses and reducing existing industry's dependence on external services and suppliers.

8. Industrial Investment Assistance

This program provides funds to encourage capital investment by advanced technology firms and support firms. New firms getting established, or existing companies investing in expanded or modernized facilities, can apply for support of up to 25% of the total investment. This program stimulates industrial growth and expansion in the advanced technology sector.

Services

Administrative Services Division

The Administrative Services Division manages the administration for the Department and interacts extensively with the Department of Revenue and Financial Services — Treasury Board Division, the Public Service Commission, and other central agencies.

This fiscal year, it was responsible for providing support services to the Department including accounting, purchasing, stenography, filing, mailing, library and personnel. It conducted activities for the Deputy Minister and Executive Directors, and provided advisory services to the Divisions and Units. This Division also co-ordinated the preparation of Departmental budgets and legislation.

Organizing a New Department

During the fiscal year, the Administrative Services Division assisted with creating and organizing the new Department. Specific activities included designing and acquiring space and equipment, establishing systems and procedures, and recruiting staff.

Communications Division

The Communications Division is an information clearing house between Saskatchewan Science and Technology and the many publics it serves. There is special emphasis on raising an awareness of the science and technology sector and the implications for Saskatchewan people.

Planning a Strategy

This fiscal year, the Division identified the communication needs of its publics and the Department. A comprehensive plan was prepared, defining long term goals and specifying strategies and tools for achieving these goals.

Serving Many Audiences

Because Saskatchewan Science and Technology serves each segment of the advanced technology sector, the Division must co-ordinate several different messages for a diverse audience. The Division provides clients with the kind of information they need to move through the innovation cycle, from the idea stage, to product development, to company formation, to sales. The Division provides information about developments, issues and implications of advanced technology. It also informs other Departments about Science and Technology's activities and assists other Divisions in developing effective communications strategies and formats.

Developing Communication Tools

Communicators have many tools to get their message across. This Division is responsible for making a good match between communication goals, target audiences and communications tools. This fiscal year, the tools utilized included consumer advertising, newsletters, print material, audio-visual material, speeches and special events such as seminars, receptions, and exhibitions. The branch was particularly active in preparing print materials describing the Department's program initiatives.

Governmental Research, Science and Technology Division

Co-ordinating Research and Development

The Division works to ensure that the province receives the maximum benefit from money spent on research, science and technology by both the Canadian and Saskatchewan governments.

Provincial Co-ordination Unit

Tracking Research Funds

The Government of Saskatchewan currently spends over $60 million annually in direct funding for research and scientific activities. In order to obtain the greatest benefits from these provincial expenditures, the Provincial Co-ordination Unit prepared the first-ever **Research Expenditure Package** in Canada. The Unit compiled data on research expenditures for 35 government departments and agencies (Table 1).

This information is being fed into a data bank and will help Saskatchewan research dollars go further by reducing unnecessary duplication of research projects.

Sharing Information

The Unit also provided industry and government departments with information about current research and development programs across Canada, and co-ordinated the Statistics Canada survey on scientific activities of the Government of Saskatchewan.

This information exchange will save the people of Saskatchewan money by suggesting a more effective use of government research funds and personnel.

Active in Special Projects

The Unit was active in a wide variety of projects such as aquaculture development, programs aimed at the physically disabled, the heavy oil upgrader projects, safety and regulation in biotechnology, a CBC science program for secondary school students, job creation, and working for the equality of women.

Intergovernmental Unit

Negotiating for Saskatchewan

During this fiscal year, the Unit successfully concluded the negotiation of a Canada-Saskatchewan ERDA Subsidiary Agreement on Advanced Technology. The Agreement was the first of its kind in Canada. It provides $33.2 million to establish and accelerate the growth of advanced technology industries in Saskatchewan.

During the fall and winter of 1984-85, the program criteria were developed jointly with the federal government and implementation procedures and systems were readied for program delivery in 1985-86.

The Unit also implemented the Memorandum of Understanding on a Canada-Saskatchewan Technology Strategy, which allows close federal and provincial co-ordination in advanced technology in Saskatchewan.

The Unit monitored, analysed and co-ordinated responses to federal policy initiatives and changes, such as the Wright Task Force, the **Senate Report on Technology Support,** Science Council of Canada reports on **Education, Science Counsellors, and Emerging Technologies,** the Natural Science and Engineering Council's **Report on University Infrastructure Financing,** and the review of the Copyright Act. The Unit prepared the provincial policy and the follow-up for the First National Conference of Federal and Provincial Ministers Responsible for Science and Technology in February, 1985.

The activities of the Intergovernmental Unit during this fiscal year made Saskatchewan a national leader in science and technology policy and a pace-setter for other provinces in the scope and level of federal/provincial co-ordination. Saskatchewan's Memorandum of Understanding and Agreement are serving as the model for initiatives by other provinces.

The increased federal funding for science and technology in Saskatchewan, attained through these joint activities and initiatives, gives Saskatchewan industry a competitive edge as it continues its rapid expansion of investment, innovation, sales and jobs.

Governmental Research, Science and Technology Division

Active Abroad

The Unit was active in consultations with Japan and several European countries. It hosted a scientific and technical delegation from Jilin Province, China, and developed direct links with science and technology bodies in Western Australia and Jilin. It also developed links with American agencies such as the National Science Foundation, the National Academy of Sciences, the National Conference of State Legislators and the United States Office of Technology.

The Unit also co-ordinated funding for a joint project between Canada and India through Shastri Indo-Canadian Institute and the University of Regina. This will give Saskatchewan University researchers recognition in an international arena.

Industrial Development Division

Contracting With New Industries

This Division sees first hand, the exciting new technology advances in Saskatchewan. It works directly with advanced technology firms in Saskatchewan on a monthly, one-to-one basis. It helps these firms pinpoint their needs and select the best possible solutions or programs to fit their needs. The staff of the division regularly consult with expanding advanced technology firms, providing advice about business planning or technology development. This fiscal year, the Division helped 17 new technology firms become established in Saskatchewan.

Industrial Development Unit

Promoting Innovation and New Ventures

The Unit administers the Inventor and Entrepreneur Programs which help technological innovators develop technologically and commercially viable products and businesses.

Inventor Services Centres, where inventors' proposals are given preliminary assessments, have been established at the Saskatchewan Research Council in Saskatoon and the University of Regina. This fiscal year, the centres handled 207 inquiries. Of these, 36 proposals merited a thorough technical and commercial evaluation, and this work was carried out at the Innovation Institute in Eugene, Oregon.

The Division also assists new ventures with business advice. **The New Ventures Planning Kit** and the **Director's Handbook** are valuable aids to those planning to establish or expand a new technology business.

The Unit also funds special projects. One such project demonstrated the practical use of compressed natural gas. A car, pick-up truck, 3-ton truck and a diesel tractor were converted from gasoline fuel to compressed natural gas. This demonstration project is the first of its kind in Canada. If successful, converted natural gas has the potential to significantly reduce farm operating costs and create a new industry in Saskatchewan.

Stimulating University Research

This Unit gives private companies a window into research being done at both universities. This fiscal year, the Unit helped establish research offices at both Saskatchewan universities. These offices will provide opportunities for technology transfer from university labs to the marketplace, and will foster increased university-industry collaboration.

The University of Regina was awarded a $100,000 contract to set up an office promoting contract research at the University. In turn, this office established the SaskTel chair in electronic communications in the Faculty of Engineering. The University of Saskatchewan was awarded a $200,000 contract for the same purpose. These offices will strengthen the links between private high technology firms and universities by giving these companies an incentive to work with university researchers.

Research and Development Funding Unit

Assisting New Industries

This Unit works to support existing industry and attract new industries to Saskatchewan. In this way it helps to broaden Saskatchewan's industrial base to include high technology companies. This Unit administers the Industrial Research and Development Program funded by the Heritage Fund. During the fiscal year, 22 projects undertaken by 18 firms received financial assistance totalling $826,241 (Table 2).

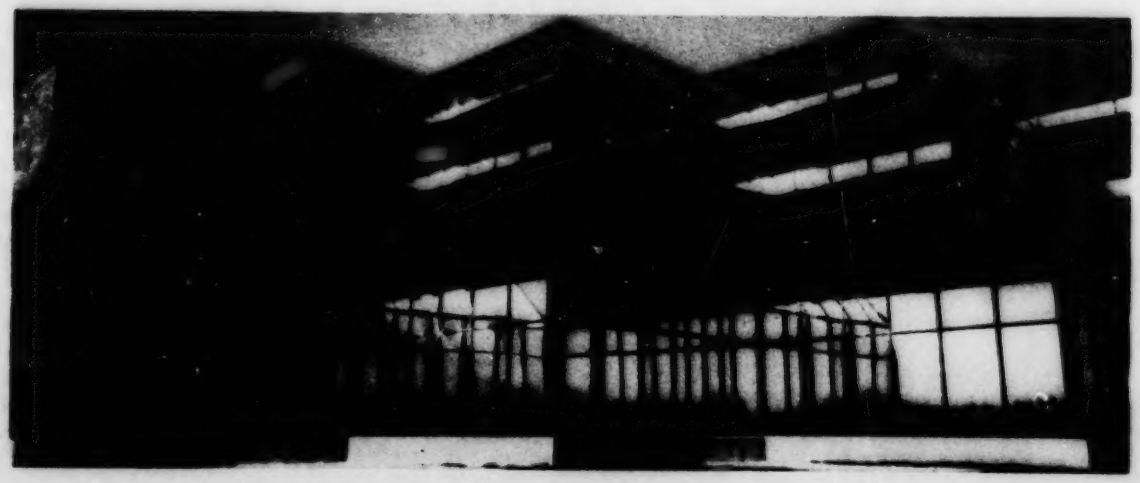
This is how some firms used these resources. Five farmers in the north-east of the province received $177,000 towards a $1.8 million project to derive bast fibre from Saskatchewan seed flax straw. The fibre will be pulped and sold to producers of fine papers in Europe, Japan and the United States. If these farmers can develop an effective process for pulping the straw, they will be able to give farmers another market for their products.

Another Saskatchewan inventor and entrepreneur has developed a radio-controlled guidance system that could revolutionize farming. The system will allow farmers to program farm machinery such as tractors, to operate with only a computer in the driver's seat.

Industrial Development Division

Meeting The Future Confidently

There is some very exciting private sector work going on in the Saskatchewan advanced technology sector. This work holds enormous potential for Saskatchewan's industrial growth. Today, industry must be creative in order to survive and grow. The Saskatchewan advanced technology sector promises to meet future challenges creatively and confidently.



Financial Statement

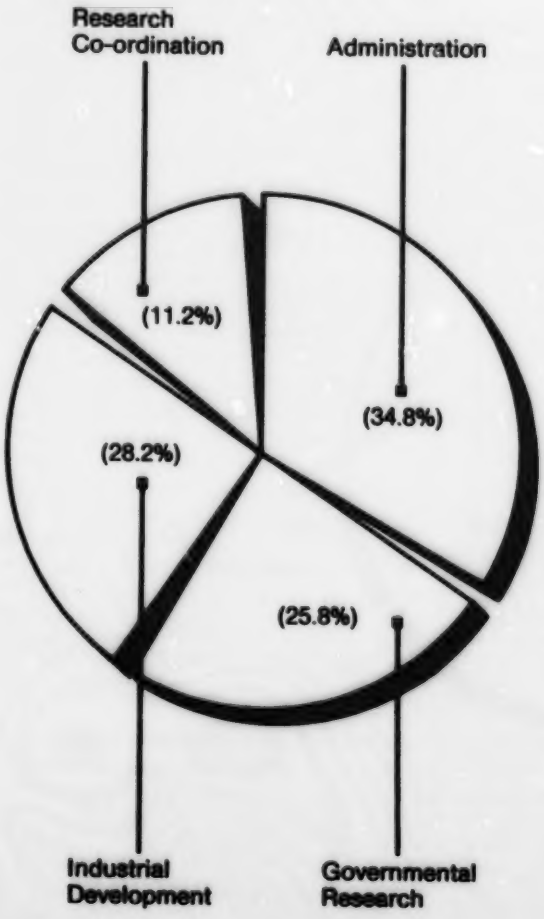
Statement of Expenditures for the Fiscal Year Ending March 31, 1985

Consolidated Fund

Administration	$340,489.32
Governmental Research	252,928.79
Industrial Development	276,277.58
Research Co-ordination	109,604.78
Total	**$979,300.47**

Fiscal Year Ending March 31, 1985

Consolidated Fund Expenditures



Financial Statement

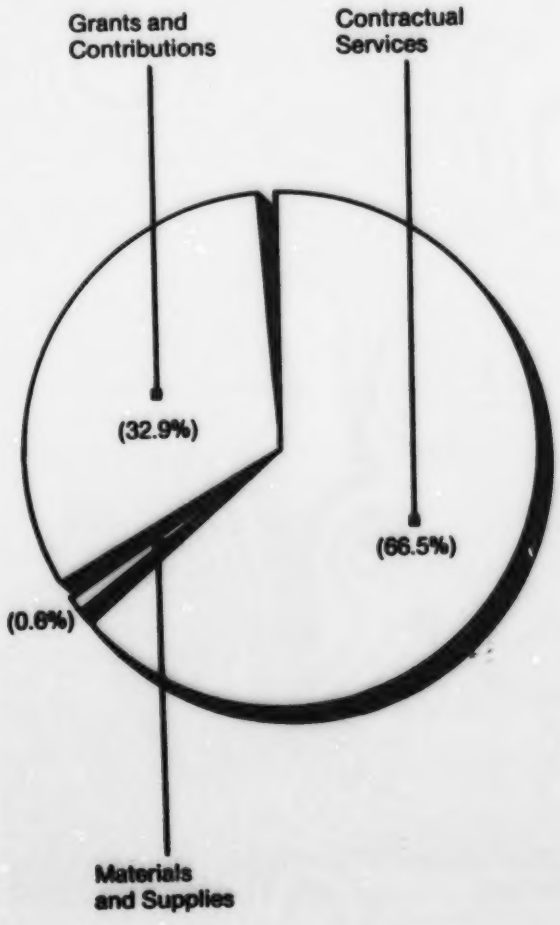
Saskatchewan Heritage Fund

Research and Development Division

Contractual Services	$ 977,330.84
Materials and Supplies	8,755.67
Grants and Contributions	483,000.00
Total	**$1,469,086.51**

Saskatchewan Heritage Fund

Research and Development Division



Tables

Table 1

Total Research Expenditures by the Government of Saskatchewan

Department/Agency	1983-84 $000	1984-85 $000	Approved % Increase
Advanced Education and Manpower*	27,170	27,689	1.9
Agriculture	4,981	5,703	14.5
Consumer and Commercial Affairs	105	352	235.2
Co-operation and Co-operative Development	221	233	5.4
Culture and Recreation	402	378	(5.9)
Economic Development and Trade	611	740	21.1
Education	202	477	135.5
Energy and Mines	4,927	6,297	27.6
Environment	419	716	43.2
Executive Council	554	625	12.7
Finance	1,008	1,052	4.4
Health	3,293	2,476	(24.8)
Highways and Transportation**	293	309	5.6
Indian and Native Affairs	321	211	(34.3)
Jusitice	370	1,101	197.5
Labour	295	366	24.1
Northern Affairs Secretariat	—	—	—
Ombudsman	—	—	—
Parks and Renewable Resources	1,539	1,521	(1.2)
Provincial Auditor***	—	—	—
Provincial Library	29	50	70.0
Provincial Secretary	—	—	—
Public Service Commission	157	162	3.3
Revenue and Financial Services	124	156	25.9
Rural Development	289	294	1.5
Saskatchewan Assessment Authority	50	53	6.0
Saskatchewan Crop Insurance Corporation	68	98	44.7
Saskatchewan Housing Corporation	350	473	35.3
Saskatchewan Research Council	3,876	4,106	5.9
Science and Technology	573	4,749	729.5
Social Services	815	2,813	245.1
Supply and Services	500	1,580	215.9
Tourism and Small Business	441	628	42.3
Urban Affairs	449	548	22.1
Women's Secretariat	—	60	—
Total Expenditures	**54,432**	**66,016**	**21.3**

* Includes Saskatchewan Archives Board as extramural expenditure
** Includes Highway Traffic Board as intramural expenditure
*** Research Expenditure Submission not required

Tables

Table 2

Saskatchewan Heritage Fund Contracted Financial Assistance
April 1, 1984 — March 31, 1985

Firm	$
1. Accutrak Systems Ltd., Regina. On-board navigation system for farm tractors	3,500.
2. Aquifer Technologies Corp., Regina. Disposable water testing system	750.
3. Beck Technology Inc., Regina. 3-dimensional mapping system	6,814.
4. CanCarbon Industries Inc., Kerrobert. Production of carbonized expanded grain	52,630.
5. CanMar Grain Inc., Regina. Processing of wild oats into food products	8,372.
6. Cortech Systems Ltd., Saskatoon. Thermo-plastic coating system	5,775.
7. Develcon Electronics Ltd., Saskatoon. Develnet-communications system	300,000.
8. Develcon Electronics Ltd., Saskatoon. RFP-communications system, U. of Rochester	6,817.
9. Fre-Flo Oil Industries Ltd., Estevan. Develop a heavy oil treater	10,000.
10. Geotec Contracting Ltd., Regina. Develop a colloidal grout plant	7,000.
11. Ground Engineering Ltd., Regina. RFP-shaft seals for nuclear waste	3,950.
12. Ground Engineering Ltd., Regina. Technology seminar-Bentonite	3,500.
13. Joytec Ltd., Saskatoon. Computerized golf driving range	7,000.
14. Meadow Lake Cattail Co., Meadow Lake. Bio-mass	38,500.
15. Prairie Fibre Inc., Tisdale. Flax straw processing	176,945.
16. Prairie Steel Products Ltd., Clavet. Grain bin flashing	6,138.
17. Scanner Graphics, Regina. RFP-Consortia Weins Johnston Borealis System	30,000.
18. SED Systems Inc., Saskatoon, RFP-radar display system	8,000.
19. SED Systems Inc., Saskatoon. Air seed monitor	60,000.
20. SED Systems Inc., Saskatoon. KuBand Down converter	19,300.
21. Wallace Energy Products Ltd., Saskatoon. Rigid board insulation	2,500.
22. Water Conditioning Canada Ltd., Regina. Municipal water treatment	68,750.
Total value of contracts signed during the fiscal year	**826,241.00**
Total Work Done under these contracts and paid out to firms	**559,799.44**

Tables

Table 3

Other Heritage Fund Activities
April 1, 1984 — March 31, 1985

Major Project Expenditures	
Office of Research, University of Regina	$100,000.00
Office of Research, University of Saskatchewan	200,000.00
Linear Accelerator Project, University of Saskatchewan	450,000.00
Inventor Services Centre, University of Regina	20,000.00
Inventor Services Centre, Saskatchewan Research Council	20,000.00
Entrepreneur Program	119,287.07
Total	**$909,287.07**